

Application No. 10/743,241
Amendment dated: February 8, 2005
Reply to Office Action of November 8, 2004

RD-28640-5

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

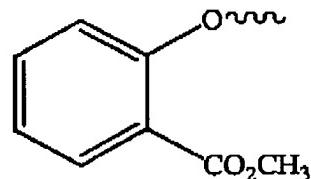
Claims 1 – 21 (Previously cancelled)

22. (Currently amended) A molded article comprising a block copolyestercarbonate copolymer prepared by a method comprising the steps of contacting a partially crystalline polycarbonate starting material (A) comprising activated terminal aryloxy groups with at least one polymeric species (B), which is a polyester comprising reactive terminal hydroxy groups under solid state polymerization conditions, to afford a product block copolyestercarbonate copolymer.

23. (Original) An article according to claim 22 which is a multilayer article.

Claims 24 – 35 (Previously cancelled)

36. (Previously amended) A molded article comprising a copolyestercarbonate prepared by a method comprising the steps of contacting a partially crystalline bisphenol A polycarbonate comprising terminal 2-methoxycarbonyl phenoxy end groups (IV)



(IV)

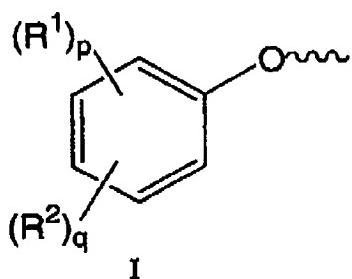
with at least one polyester comprising reactive hydroxyl groups under solid state polymerization conditions to afford a product copolyestercarbonate, wherein said partially crystalline bisphenol A polycarbonate is prepared by a method comprising melt reaction of bis(methyl salicyl)carbonate with bisphenol A.

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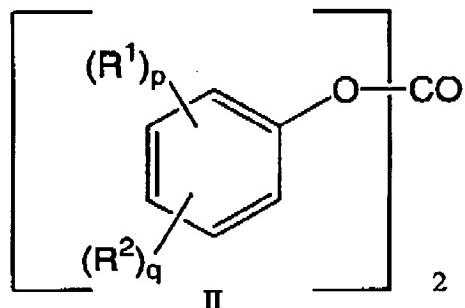
37. (Original) An article according to claim 36 which is a multilayer article.

38. (New claim) The article according to claim 23 wherein said partially crystalline polycarbonate starting material (A) comprises terminal aryloxy groups having structure I



wherein R¹ is independently at each occurrence a C₁-C₂₀ aliphatic radical, C₄-C₂₀ cycloaliphatic radical, C₄-C₂₀ aromatic radical; R² is independently at each occurrence a halogen atom, nitro group, cyano group, C₁-C₂₀ alkoxy carbonyl group, C₁-C₂₀ acyl group, C₄-C₂₀ cycloalkoxy carbonyl group, C₆-C₂₀ aryloxy carbonyl group, C₁-C₂₀ alkylaminocarbonyl group, C₂-C₄₀ dialkylaminocarbonyl group, or a C₁-C₂₀ perfluoroalkyl group; p is an integer having a value 0 to 4, and q is an integer having a value of 1 to 5.

39. (New claim) The article according to claim 23 wherein said partially crystalline polycarbonate starting material (A) comprises structural units derived from at least one dihydroxy aromatic compound and at least one diaryl carbonate II



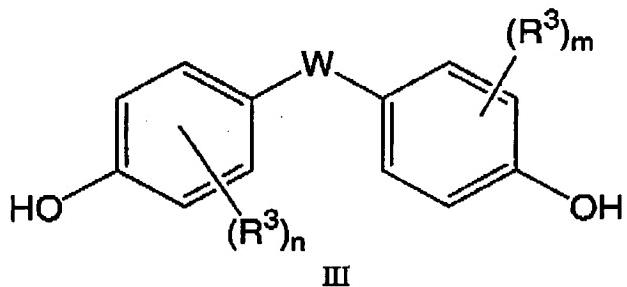
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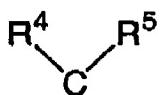
wherein R¹ is independently at each occurrence a C₁-C₂₀ aliphatic radical, C₄-C₂₀ cycloaliphatic radical, C₄-C₂₀ aromatic radical; R² is independently at each occurrence a halogen atom, nitro group, cyano group, C₁-C₂₀ alkoxy carbonyl group, C₁-C₂₀ acyl group, C₄-C₂₀ cycloalkoxy carbonyl group, C₆-C₂₀ aryloxycarbonyl group, C₁-C₂₀ alkylaminocarbonyl group, C₂-C₄₀ dialkylaminocarbonyl group, or a C₁-C₂₀ perfluoroalkyl group; p is an integer having a value 0 to 4, and q is an integer having a value of 1 to 5.

40. (New claim) The article according to claim 39 wherein the diaryl carbonate II is selected from the group consisting of bis(2-methoxycarbonylphenyl) carbonate, bis(2-ethoxycarbonylphenyl) carbonate, bis(2-butoxycarbonylphenyl) carbonate, and bis(2,4,6-trifluorophenyl) carbonate.

41. (New claim) The article according to claim 39 wherein said dihydroxy aromatic compound is a bisphenol having structure III



wherein R³ is independently at each occurrence a halogen atom, nitro group, cyano group, C₁-C₂₀ alkyl group, C₄-C₂₀ cycloalkyl group, or C₆-C₂₀ aryl group; n and m are independently integers 0-4; and W is a bond, an oxygen atom, a sulfur atom, a SO₂ group, a C₁-C₂₀ aliphatic radical, a C₆-C₂₀ aromatic radical, a C₆-C₂₀ cycloaliphatic radical or the group

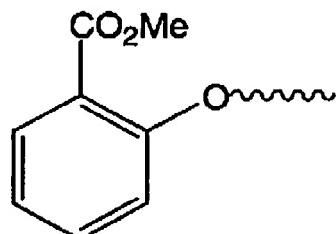


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wherein R^4 and R^5 are independently a hydrogen atom, C_1-C_{20} alkyl group, C_4-C_{20} cycloalkyl group, or C_4-C_{20} aryl group; or R^4 and R^5 together form a C_4-C_{20} cycloaliphatic ring which is optionally substituted by one or more C_1-C_{20} alkyl, C_6-C_{20} aryl, C_5-C_{21} aralkyl, C_5-C_{20} cycloalkyl groups or a combination thereof.

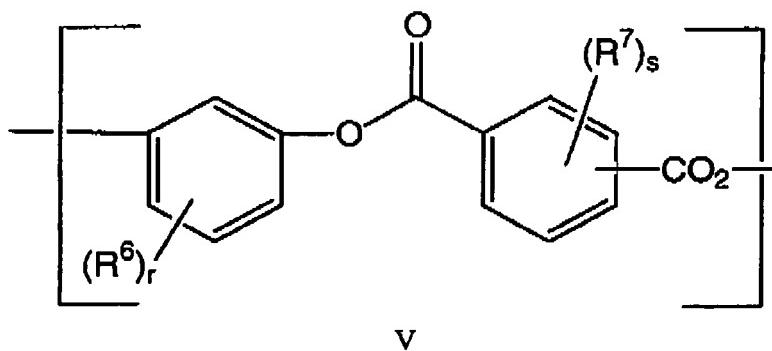
42. (New claim) The article according to claim 23 wherein said partially crystalline polycarbonate starting material (A) comprises 2-methoxycarbonylphenoxy terminal aryloxy groups IV



IV

and structural units derived from bisphenol A.

43. (New claim) The article according to claim 23 wherein said starting material (B) comprising reactive terminal hydroxy groups comprises structural units V



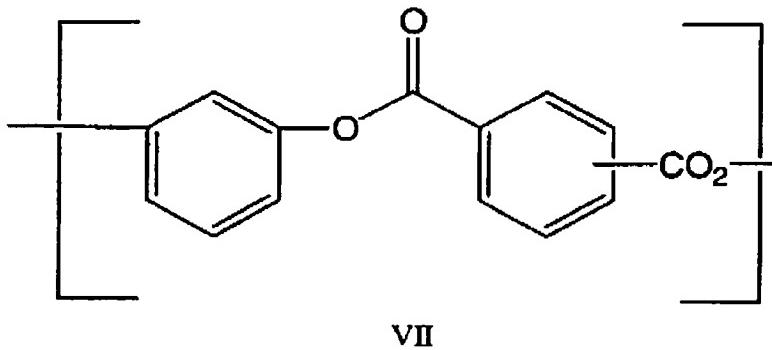
V

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wherein R⁶ and R⁷ are independently at each occurrence a halogen atom, C₁-C₂₀ aliphatic radical, C₄-C₂₀ cycloaliphatic radical, or a C₄-C₂₀ aromatic radical, and r and s are independently integers having values from 0 to 4.

44. (New claim) The article according to claim 43 wherein said polymeric species (B) comprising reactive hydroxy groups is a polyester comprising structural units VII



and having a degree of polymerization of at least about 4.

45. (New claim) The article according to claim 23 wherein said partially crystalline polycarbonate starting material (A) has a percent endcap between about 50 and about 100 percent.

46. (New claim) The article according to claim 23 wherein said starting material (B) is a copolymer prepared by heating in the absence of a catalyst, a mixture comprising resorcinol, diphenyl terephthalate, and diphenyl isophthalate.

47. (New claim) The article according to claim 46 wherein said diphenyl terephthalate and said diphenyl isophthalate have a molar ratio, said molar ratio being in a range between about 1 to 10 and about 10 to 1.

48. (New claim) The article according to claim 23 wherein said starting material (B) is a copolymer prepared by interfacial polymerization of resorcinol with terephthaloyl dichloride and isophthaloyl dichloride in the presence of a catalyst.

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49. (New claim) The article according to claim 48 wherein said terephthaloyl dichloride and said isophthaloyl dichloride have a molar ratio, said molar ratio being in a range between about 1 to 10 and about 10 to 1.

50. (New claim) The article according to claim 23 wherein said starting material (A) has a crystallinity in a range between about 15 and about 40 percent.

51. (New claim) The article according to claim 23 wherein said solid state polymerization conditions comprise heating at a temperature between about 100°C about 240°C for a period of between about 1 and about 10 hours.

52. (New claim) The article according to claim 23 further comprising preparing a mixture of said starting materials (A) and (B).

53. (New claim) The article according to claim 52 comprising dry mixing said starting material (A) with said starting material (B).

54. (New claim) The article according to claim 52 comprising precipitating a mixture of said starting materials (A) and (B) from solution.

55. (New claim) The article according to claim 23 wherein said starting materials (A) and (B) have a weight ratio in a range between about 0.01 and about 100 grams of starting material (A) per gram of starting material (B).

56. (New claim) The article according to claim 23 wherein the product copolymer has a measurable degree of blockiness corresponding to blocklengths which are at least 50 percent longer than the corresponding random distribution of structural elements.